

DRAFT - Next Generation Manufacturing Initiative

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I. Background

Wisconsin is built on a great tradition of manufacturing excellence. We have a \$47.2 billion industrial economy that employs over 500,000 directly with well paying jobs and over a million more in sectors supporting the manufacturing industry. Exports are soaring. Manufacturing – the science and art of creating value from raw material – is and will continue to be a top economic driver for the state.

But the time-honored practices that saw our manufacturing industry through the last century won't see us through the next. Global competition is fierce and the fastest growing market opportunities are outside our borders. Rapid customized solutions are the order of the day, workforce demographics are fundamentally changing, and the ability to manage complex networks of material and service suppliers is a requirement. To survive in the 21st century, manufacturing owners, managers, and workers - and the regions that support these firms – must adapt and make the transition to Next Generation Manufacturing.

II. What are the characteristics of a Next Generation Manufacturer firm?

- They embrace systemic, **continuous improvement** - principally lean manufacturing – as a means to improve and sustain annual productivity gains.
- They invest in **innovation and technology** to develop new products and markets, which anticipate unmet customer needs.
- They are **globally engaged** – either active in exporting or partnering – as a means to tap emerging international markets and take advantage of competencies outside the U.S.
- They have active strategies to **attract and develop talent** necessary to win in a Next Generation Manufacturing world.
- They **incorporate “green”** in their growth and operating strategies as a means to reduce waste or take advantage of the growing “green” market.

Many companies today are attempting to incorporate one or more characteristics of Next Generation Manufacturing through a variety of point solutions. True Next Generation Manufacturers are systematic and focused in their approach and constantly measure their individual results against a variety of performance benchmarks.

Next Generation Manufacturing is an ongoing journey, not a destination. Manufacturers don't have to master all five of these attributes but the Wisconsin manufacturer of 2015 will likely be proficient in at least one of them and actively engaged in others.

III. What are the characteristics of a Next Generation Manufacturer region?

The regions that will have a higher concentration of Next Generation Manufacturing firms will look different than the manufacturing regions that produced successful manufacturing firms in the past. NGM regions will have the following characteristics:

- Clusters of design, engineering, marketing, financial, and legal services that collaborate with local NGM firms.
- Policymakers that understand NGM and produce policies that support NGM retention, growth, and attraction.

- A workforce and educational system that is recognized for producing, developing, attracting, and supporting the talent required to run a NGM firm.
- R&D and innovation centers targeted to support NGM firms.
- Corporate headquarters of fast growing and competitive Next Generation Manufacturers that are leaders in their industry
- Strong understanding of and connectivity to other global markets to facilitate NGM exports, international partnerships, global supply chain participation, and access to technology.

IV. What is needed to launch a Next Generation Manufacturing (NGM) Initiative?

- A simple NGM framework. We cannot move forward without the ability to communicate to the media, policymakers, and the public about NGM in simple, intuitive terms.
- Alignment. Key leaders in the region and state have to develop a consensus around definitions and goals. Those partners include WMEP; Gov. Doyle's office; the Wisconsin Department of Commerce; the Wisconsin Technical College System; Wisconsin Manufacturers and Commerce, labor organizations, Milwaukee 7; and other regional economic development groups. In this complex world, alignment of direction increases the potential of developing a useful and cohesive set of solutions.
- Metrics. We won't know where we are going if we don't know where we are. The ability to mobilize targeted and effective action depends on providing clarity of goals. We need a set of simple, compelling benchmarks to define NGM success in Wisconsin.
- Resources. Nothing moves forward without resources. All of the key partners in making Wisconsin a NGM leader have to invest people, time, and money necessary to achieve NGM goals.

V. Next Steps and Timelines

- Dissemination of NGM framework and definitions to leaders in the state and regions. Framework to be vetted by M7 Manufacturing Council and WMEP Operations Committee. Completion by June 1, 2008.
- Development of NGM agenda with partners. Completion by July 1, 2008.
- Execution of *Next Generation Manufacturing Research Study* to benchmark a statistically significant sample of Wisconsin manufacturers; identify key input and output measures to assess performance. This study will establish the benchmarks now and in the future for key regions and the state as a whole. June 2008 launch, completion by Sept. 1, 2008.
- Broadly disseminate study results to manufacturers, business leaders, elected officials, general public, media, economic development organizations, academic institutions. September 2008.
- Implement programs from various partners that address study recommendations, including worker training, performance strategies, export assistance, regional economic impact strategies, etc. Fall 2008.